This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (currently amended) A ~~Method~~ method for the determination of ~~the~~ an acoustic impedance Z, comprising the steps of

- arranging a probe with a ~~mean~~ means for acoustic stimulation and a microphone at the area to be measured;
- sending out acoustic signals over said ~~mean~~ means and receiving again over the microphone;
- transforming the received signals by the microphone into electrical signals ~~and transferring them~~ for input to an analysis unit, in which the amount of the impedance Z will be determined;
- ~~using~~ inputting a previously defined stimulation into ~~followed by~~ a twoport chain transfer matrix ~~in form of a twoport until the impedance Z~~ as a calculation base for the impedance Z,
- ~~whereby~~ wherein the voltage ratio between the stimulation and the impedance is described as a dimensionless transfer function in a form of a complex function of the stimulation ~~fequency~~ frequency;
- generating a series of acoustic calibration signals by a number of known acoustic impedances covering different calibration scopes by means of the defined stimulation;
- recording the calibration signals received by the microphone and merging the electric values together with the respective voltage values of the stimulation for the evaluation of the results of the respective transfer functions;
- merging together the transfer functions of the calibration signals into [[a]] an over-determined linear system of

equations and solving the system of equations ~~and~~ for calculating ~~the~~ two coefficients; and ~~finally~~

- determining the impedance Z, ~~to be~~ calculated by evaluating ~~evalutating~~ the transfer function under the defined stimulation by use of the two coefficients ~~determined by the calibration~~.

2. (original) Method of claim 1 wherein a loudspeaker is used as a mean for the acoustic stimulation.

3. (original) Method of claim 1 wherein the over determined linear system will be solved in terms of minimum squares.

4. (original) Method of claim 1 wherein at least two different impedances are used.

5. (currently amended) Method of claim 1 wherein a combination of hollow ~~bodys~~ bodies and small tubes with defined dimensions and known impedances are used as calibrating impedances.

6. (currently amended) Method of claim 1 wherein a frequency generator is used for the stimulation~~, preferably~~ by generating ~~of~~ a broad band signal of ~~, preferably a~~ white noise.

7. (original) Method of claim 1 wherein the transfer functions will be calculated by the division of the measured auto

power spectrum of the stimulation through the average cross power spectrum between stimulation and impedance to be measured.

8. (currently amended) Method of claim 1 wherein two series connected twoport chain ~~matrix~~ matrices ~~in form of two serial connected twoports~~ are used, ~~whereby~~ wherein the microphone is arranged ~~between both twoports,~~ between the output of the first twoport and the input of the second twoport.

9. (currently amended) Method of claim 8 ~~whereby~~ wherein the elements of the two chain matrices are reduced to three base parameters, which are evaluated by measurements of at least three calibration impedances with known impedances and the respective solution of the over ~~determinded~~ determined linear system of ~~equation~~ equations to further determine the impedance to be measured by measuring of the transfer function as a division between the stimulation and the microphone signal by use of the base parameters.

10. (currently amended) Method of claim 9 ~~whereby~~ wherein the linear system of ~~equation~~ equations will be solved in terms of ~~miminum~~ minimum squares.

11. (currently amended) Method of claim 1 ~~whereby~~ wherein an acoustic resistor is arranged between the stimulation and the microphone.

12. (currently amended) Method of claim 11 ~~whereby~~ wherein the sensitivity of acoustic resistor is optimized with respect to microphone errors.

13. (currently amended) Method of claim 1 ~~whereby~~ wherein a frequency and/or impedance specific weighting of the linear systems of equation ~~will be~~ is performed.

14. (currently amended) ~~Method~~ A method for the determination of the acoustic impedance of cavities, such as ~~the~~ an ear in connection with a hearing ~~aids~~ aid, comprising the steps of

- arranging a probe with a microphone and a speaker at the area to be measured;
- sending out acoustic signals over the speaker into the cavity and receiving again over the microphone;
- transforming the received signals by the microphone into electrical signals and transferring them to an analysis unit;
- using a previously defined stimulation input to ~~followed by~~ a twoport chain transfer matrix ~~in form of a twoport until the impedance Z~~ as a calculation base for the impedance Z,
- ~~whereby~~ wherein the voltage ratio between the stimulation and the impedance is described as a dimensionless transfer function in a form of a complex function of the stimulation ~~fequency~~ frequency;
- generating a series of acoustic calibration signals by a number of known acoustic impedances covering different calibration scopes by means of the defined stimulation;

- recording the calibration signals received by the microphone and merging the electric values together with the respective voltage values of the stimulation for the an evaluation of the results of the respective transfer functions;
- merging together the transfer functions of the calibration signals into [[a]] an over-determined linear system of equations and solving the system of equations ~~and~~ for calculating and storing ~~the~~ two coefficients; and ~~finally~~
- determining the impedance Z to be calculated by ~~evaluting~~ evaluating the transfer function by use of the two coefficients ~~determined by the calibration~~.

15. (currently amended) Method of claim 14 wherein two series connected twoport chain matrices ~~in form of two serial connected twoports~~ are used, ~~whereby~~ and wherein the microphone is arranged between ~~both twoports, between~~ the output of the first twoport and the input of the second twoport.

16. (currently amended) ~~Apparatus~~ An apparatus for the determination of ~~the~~ an acoustic impedance comprising a probe, a microphone, and a speaker, ~~whereby~~ wherein an acoustic resistor is arranged ~~following~~ between the speaker and an exit opening in a connecting channel to the microphone ~~or to the exit of the probe respectively~~.

17. (currently amended) Apparatus of claim 16 ~~whereby~~ wherein a connecting channel is built up within the probe between the speaker and the microphone, leading subsequently to the

microphone into an adapter, which is arranged in an unlockable fashion with a housing of the probe.

18. (currently amended) Method of claim 1 ~~to measure~~ for measuring the impedances of hearing devices, part systems of hearing devices, ~~and~~ shells of hearing devices, ~~especially of~~ and vents of hearing devices.

19. (currently amended) Method of claim 14 ~~to measure~~ for measuring the impedances of hearing devices, part systems of hearing devices, ~~and~~ shells of hearing devices, ~~especially of~~ and vents of hearing devices.

20. (original) Method of claim 1 for measuring the impedances in the field of quality control, preferably the quality control of hearing device transducers, porous bodies, membranes and textiles.

21. (currently amended) Method of claim 14 for measuring the impedances in the ~~field~~ fields of quality control~~, preferably the quality control~~ of hearing device transducers, porous bodies, membranes, and textiles.

22. (currently amended) Apparatus of claim 16 for the measuring of the impedances of hearing devices, part systems of hearing devices, ~~and~~ shells of hearing devices, and ~~especially of~~ vents of hearing devices.

23. (currently amended) Apparatus of claim 17 for the measuring of the impedances of hearing devices, part systems of hearing devices, ~~and~~ shells of hearing devices, and ~~especially of~~ vents of hearing devices.

24. (currently amended) Apparatus of claim 16 for measuring the impedances in the field of quality control[[,]] ~~preferably the quality control~~ of hearing device transducers, porous bodies, membranes, and textiles.

25. (currently amended) Apparatus of claim 17 for measuring the impedances in the field of quality control[[,]] ~~preferably the quality control~~ of hearing device transducers, porous bodies, membranes, and textiles.

26. (new) An apparatus for the determination of an acoustic impedance Z comprising:

a probe;

a microphone;

a speaker;

an acoustic resistor arranged between the speaker and an exit opening in a connecting channel connecting to one of the microphone and an exit of the probe; and

an analysis unit for receiving electrical signals from the microphone, and for determining an impedance Z, wherein

a series of acoustic calibration signals of a number of known acoustic impedances covering different calibration scopes are generated by means of a predefined stimulation for output by the probe for reception by the microphone.